

These he carefully translated and annotated, and numbers of the translations and remarks appeared in the scientific journals of the day both in India and in Europe. He was president of the Bombay branch of the East India Association, and up to the time of his illness constantly took part in the discussions of that body. His exertions in the cause of native female education procured for him the respect and gratitude of his more advanced fellow-countrymen. He established the Literary and Scientific Society, Bombay, and became its first president. His exertions to procure a recognised system of female education amongst the Hindoos were rewarded by a collection made by his admirers of some 12,000 rupees, which, at his request, was expended in establishing a school which has ever since been known by the name of "Bhau Dajee's Girls' School." He was elected a member of the Bombay Board of Education in 1852. He also filled the presidential chair of the Grant Medical College Society. As vice-president of the Bombay branch of the Royal Asiatic Society, he devoted a considerable portion of his spare time to furthering the interests of the society, and to the museum he presented many valuable contributions. With all the leading public questions of his time Bhau Dajee was familiar, and invariably took part in their discussion. Although he was in possession of a large practice he never accumulated a fortune, as he always willingly and readily gave money for the relief of distress. One of his latest and most important discoveries in medical science was the cure for leprosy, which he was on the point of perfecting when seized with paralysis. While ill he was most anxious that his manuscripts should be collected and got ready for publication. This duty will, we understand, be performed by his brother, Dr. Narayen Dajee, himself an accomplished scholar and well-known medical practitioner. Dr. Bhau visited many parts of India, but never went to England, though we believe he had a strong inclination to do so. Numberless instances of his public spirit and generosity might be cited did our space permit.

The public services of Dr. Bhau Dajee have been so numerous and important that it is but right that steps should be taken to commemorate them by means of a memorial, and we hope that but a short period will be allowed to elapse before some definite proposal will be laid before the public.

The deceased doctor was a member of numerous scientific societies both in India, in Europe, and in America.

OUR SULPHUR SUPPLIES

SIGNOR PARODI has addressed a report to the Italian Government, in which he gives his estimates that the sulphur of Sicily will be exhausted in fifty or sixty years. At present it is on Sicily we depend almost entirely for the supply of our sulphur—that "mainstay of present industrial chemistry"—which is so largely used in our arts and manufactures. Our demand, too, has been a steadily increasing one. In 1842 we imported 16,686 tons, and in 1862 the demand had risen to 75,000 tons. In the production of nearly every textile fabric sulphuric acid is used; it is more or less directly employed in soap and glass-making, metal refining, and the preparation of artificial manures requires large quantities. Our consumption seems to be limited only by the supply.

Recently a correspondent in the *Journal of the Society of Arts* stated, from his own experience of Sicily, that "with few exceptions, the ore is carried to the surface on the backs of boys. . . . The produce of a mine in Sicily is chiefly determined by the difficulty of getting boys . . . and the mines soon reach a depth at which they cease to be profitably worked. All the sulphur in the island, therefore, below 400 feet is untouched." He consequently doubts the correctness of Signor Parodi's estimate.

Still this report of Signor Parodi's is likely to cause some uneasiness, and the prospects of our obtaining a large

supply at a cheap rate from Iceland must not be forgotten. The island is but two days' journey from Scotland, and from recent reports on the harbours there seems no reason why a continual intercourse might not be kept up. Many travellers have borne testimony to the immense fields of unworked sulphur there, and the fresh deposition in worked districts is stated to take place at a wonderfully rapid rate. In the celebrated softatare of Puzzuoli, near Naples, after the mixture of gravel and sulphur has been submitted to the distillation of the sulphur,* the gravel is returned, and in thirty years is again so rich in sulphur as to admit of the same process. In Iceland this renewal of sulphur in the gravel is said to occupy but three years; the supply is therefore practically inexhaustible. Estimates show that while Sicilian sulphur is 5*l.* 17*s.* a ton in Britain, Icelandic would be about 2*l.* 18*s.* a ton.

According to a pamphlet by Dr. Carter Blake, recently issued, we learn that a lease for working some of the mines in the northern and eastern provinces of Iceland has been granted to Mr. Lock, of London.

A GREAT TELESCOPE

WE have already referred to the series of splendid gifts from Mr. James Lick, from San Francisco, to the State of California, the whole amounting to 2,000,000 dols. The most remarkable of these donations is one of 700,000 dols, for the purpose of erecting and endowing an astronomical observatory, and equipping it with "a powerful telescope, superior to, and more powerful than, any telescope ever yet made." The author of this magnificent bequest (the *New York Times* states) is in every sense of the word a self-made man, and has followed the wise example of the founders of our Cooper Institute and Lennox Library in securing the proper fulfilment of his trust by providing for its organisation in his lifetime. The United States already possess in the telescope of the Naval Observatory at Washington an instrument of the same gigantic proportions as that erected by Mr. Newall in this country; and we may add that this was the first instrument constructed after Mr. Newall had shown by his costly experiment that such dimensions were possible. The glass for the lenses of both these instruments was furnished by Chance and Co., of Birmingham, England. Under Mr. Lick's gift, Messrs. Alvan Clark and Sons are designated as the final judges of the most appropriate site for the proposed great telescope of California and of the world. How amply endowed will be the Lick Observatory, on the summit of the Sierra, may be conjectured from the fact that the great Washington telescope cost but 44,000 dols. The trustees who have the spending of the 700,000 dols. will be limited simply by the ability of the glass-makers to turn out a lens of sufficient size. We assume (continues the above paper) that the proposed telescope will be a refractor, since the great reflectors, of which the best known are Herschel's and Rosse's, have been found comparatively useless for accurate observations. The great speculum or object-mirror of the former was 49*1/2* in. diameter, and the latter had two specula of 6 ft. diameter. Both were among the marvels of the generations that saw them constructed; but the latter, albeit only thirty years old, is nearly as much out of date as the former, which was constructed eighty-five years ago. It is just possible that the existence of a bequest large enough to yield six times the price which has ever been paid for a telescope may be the means of giving birth to lenses of what would now be reckoned impossible size and perfection. The 26-in. object lens of the Washington telescope has been duplicated in the one ordered by Mr. McCormick, of Chicago, for the Washington and Lee University of Lexington; but, though larger lenses have been talked of, their successful production is still problematical. Many costly

* Ure's Dict. of Arts, &c., vol. iii., p. 830.

failures have preceded the attainment of the 26-in. diameter, and Chance and Co. are said to be the only firm in the world who will undertake the manufacture of a disc of that size. Science knows no country, and Mr. Lick's munificent bequest in the cause of astronomy will be hailed by savans all over the world.

MENTAL POTENTIALITY IN CHILDREN OF DIFFERENT RACES

MONS. J. C. HOUZEAU, the author of the "Études sur les facultés mentales des animaux comparées à celles de l'homme," has lately concluded, in Jamaica, a series of laborious experimental investigations on the relative or comparative intellectual capacity and development of the children of different races inhabiting that island. The conclusions arrived at by such an observer are worthy of the highest consideration in Europe: while the subject is one that has an important bearing on various popular educational, ethnological, and social questions of the day—such as the unity of mankind, and the possibility or probability of civilising savage races. A recent letter addressed to me by M. Houzeau, contains the following brief account of his experiments and conclusions; an account that cannot fail, I think, to be interesting to the readers of NATURE.

"I have been busy, meanwhile, on a curious study about the comparative development of intelligence of children belonging to different races. I had an opportunity here to submit to the test black, brown, and white children. Fifteen of them were sent to me every day for two hours by their parents, my country neighbours: three of them white, seven coloured of various shades, and five black. For a whole year I gave them myself common instruction, and carefully watched their proceedings and their rate of improvement. I do not expect to publish anything about that experiment, at least at this time. But I will state here the conclusions to which it has led me.

"1. There is in each child a different degree of intellectual proficiency, which could be called, in mathematical language, his or her 'personal coefficient.' However, these individual differences are much less than I had anticipated, and are not the striking feature in the unequal rate or speed of improvement.

"2. In this unequal speed, I see nothing—at least nothing clearly and unmistakably discernible—that can be referred to the differences of race. This will probably appear strange after all that has been said of 'inferior races.' Should other facts show that my experiment was not properly conducted, and that the trial was not conclusive, I am ready to give up. Still, it is at least my 'provisional conclusion.'

"3. The rate of improvement is due almost entirely to the relative elevation of the parental circle in which children live—the home influence. Those whose parents are restricted to the narrowest gauge of intellectual exercise, live in such a material and coarse *milieu*, that their mental faculties remain slumbering and gradually become atrophied; while those who hear at home of many things, and are brought up to intellectual life, show a corresponding proficiency in their learning.

"The question of course would require more space and development. I rather mention it as a subject for study than anything else. I had in my life some rare opportunities to study 'inferior races,' including Indians of America, and 'half-breed Indians' of the mixed race of Mexico. I believe most of the savans of Europe have but a very incomplete idea of the mental, and still more of the moral, status of 'inferior societies.' Much remains to be said about it."

My present object being briefly to introduce to English readers M. Houzeau's views as to the relative intellectuality of the children of different races in Jamaica, I will

not here explain in what respects I differ from his conclusions—how far I regard his experiments inconclusive. I would only remind him, as well as the reader, of the impossibility of duly estimating the direction or amount of future or adult mental development by the study of mental phenomena in the young. It has been, I think, proved, for instance, that—

1. At or up to a certain age girls are as sharp as, or sharper than, boys at lesson-learning and repeating. Cases are constantly being recorded—perhaps paraded—in the newspapers of girls or young women beating boys or young men of equal age in competitive examinations. And yet it is not to be inferred that the female mind is either superior or equal to the male, that is, in a comparison of averages. For the fact is, that throughout the animal series, including Man, the female mind is, in some respects, different from, and inferior to, that of the male. We know, moreover, that female superiority, when it exists, is usually at least confined to school life. In subsequent intellectual development proper, man, as a rule, far surpasses woman. Again—

2. Up to a certain point there is the closest possible parallelism between the mental endowments of the human child and of the young of sundry other animals. At certain stages of development, and in certain animals, the comparison is not even in favour of the child. And yet, though we are still far from knowing what is the range of the mental potentialities of other animals than man, we have no reason for supposing that in any of them will the maximum intellectual or moral development attain to the average in cultured and civilised man.

W. LAUDER LINDSAY

NOTES

AT a recent meeting of the Trustees of the "Gilchrist Educational Trust," they decided to appropriate a sum not exceeding 1,000/- to the promotion of scientific research, with the prospect of repeating this grant annually if it should bear adequate fruit. The plan proposed is to ask the Council of the Royal Society to make recommendations to the Trustees, stating in each case the object of the research, the qualifications of the individual by whom it is to be conducted, and the sum they propose to be assigned to him; the purpose of the grant being to assist men of science who have shown themselves capable of advancing science, and who may feel themselves precluded from devoting their time to *unremunerated* work, by freeing them from the necessity of giving up investigations of great promise for the sake of mere bread-earning. We believe that this important movement is due to the representations of Dr. Carpenter, the Secretary, to the Trustees, that they would be in this mode worthily applying about a fourth part of their income in meeting a great national want, and in promoting the second of the objects as to which they have an uncontrolled discretion under the will of the founder—"The benefit, advancement, and propagation of learning in every part of the world." The Council of the Royal Society has, we understand, appointed a Committee to consider the conditions under which the Council may most fittingly undertake the responsibility of advising the Gilchrist Trustees as to the appropriation of their grants.

THE matter in dispute between the President and Council of the Linnean Society and a certain section of the Fellows, which caused so much excitement in the Society some months ago, and led to the premature retirement of Mr. Bentham from the chair, was referred to Lord Hatherley as arbitrator, and has just been decided entirely in favour of the President and Council; so that no further action will be taken in the matter.

WE regret to record the death, on July 31, of Dr. Charles T. Beke, whose name is so well known in connection with geography, ethnology, and philology.